REMARKS

We have carefully considered the Office Action dated July 6, 2006, in which claims 7, 8 are allowed, claim 12 is objected to, claims 11, 13 and 14 are rejected as anticipated by each of three cited references, and claims 13 and 14 are rejected under section 112. We have amended claim 12 to incorporate the subject matter of claim 11. Further, in response to the section 112 rejections, we have amended claims 13 and 14 to more clearly point out that the current INS Kalman filter uses GPS observables measurements and, as appropriate, non-GPS observables measurements that over time measure position change. Further, we refer to page 21, line 21 et seq. for a discussion of the non-GPS observables measurements, such as the wheel rotations (claim 14), which translate to along track differences that over time measure position change.

The current invention as set forth in independent claim 11 utilizes a modified INS Kalman filter that uses inertial measurements and GPS observable measurements (claim 11) and, as appropriate, non-GPS observable measurements (claims 13 and 14) to update and maintain **current and previous position related information.** This is in contrast to known prior INS Kalman filters, which update and maintain only current position related information.

The current method uses a modified INS Kalman filter as discussed in detail beginning at page 15, line 12. Specifically, the propagation step of the INS Kalman filter is modified to support a system model that involves both the prior and the current positions. The INS Kalman filter uses the GPS observables measurements, as appropriate, non-GPS observables measurements, and the current and previous position related information, to essentially eliminate the effects of system dynamics from the system model. See, also page 4, lines 7-15. Thus, the current method determines a more accurate position.

In contrast, the Kim, Buchler and the Coatantiec references describe Kalman filters that update in a conventional manner, that is, that update current position. Further, the Kim, Buchler and Coatantiec references update the current position using errors

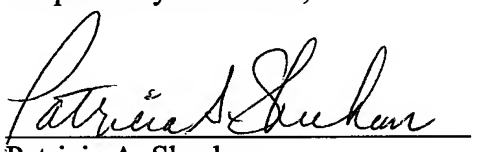
associated with a given time. See, e.g., Buchler, Col. 5, lines 4-8; Kim, page 526; Coatantiec, paragraph 0061. In contrast, the current system's use of the GPS and/or non-GPS observables measurements to observe position change over time, allows the system to limit the INS position error growth. See, page 18, lines 23 et seq.

None of the cited references describe a system in which the Kalman filter is modified to use observables information to update and maintain **current and previous position related information**, as is set forth in independent claim 11 and the claims that depend therefrom. Further, such a modified Kalman filter is neither taught nor suggested by these references.

In light of the above, we ask that the Examiner reconsider his rejections of the currently pending claims and issue a Notice of Allowance for all pending claims.

Please charge any fee occasioned by this paper to our Deposit Account No. 03-1237.

Respectfully submitted,



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